

malaria, all of which were under treatment with quinine (20 to 30 grains daily). The tests consisted of the original Wassermann (using two M. H. D. of complement), Tschernogobouw's modification, Fleming's modification and the Hecht-Fleming method. In 19 cases the first blood specimen was collected during an actual rigor or at a short interval after a rigor, in 45 there was no record of rigor but the first specimen was obtained when the parasites were found in peripheral blood and in 10 cases the blood was collected when no parasites were found but typical relapses subsequently developed with parasites in the finger blood. All cases clinically syphilis or giving a history of previous syphilitic infection were excluded. On retesting the bloods only 7 per cent were found to give positive Wassermann reactions. These investigations indicate that the blood in active benign tertian, malignant subtertian and mixed malaria does not give a positive Wassermann reaction; that positive findings are due to syphilitic infection or to certain factors in the technic employed or to non-specific changes in the patient's serum; that in such cases the serum should be retested and that a positive reaction confirmed by a subsequent test is evidence of luetic infection.

The Wassermann Reaction in Relapsing Fever.—Out of 18 cases of relapsing fever, ROAF (*British Jour. Exper. Path.*, 1922, 3, 59) found 11 positive to the Wassermann reaction (Emery's and Fleming's modifications) at some stage of the disease, but 6 of the 7 negative cases were tested only once. Excluding 2 of the positive cases in which the test was not repeated, 3 out of 9 persisted during the period of observation (seventeen to twenty days), while all others had become negative eight to thirteen days after the onset of the fever. Two cases were negative on first examination, but became positive three and six days after onset. As a result of these observations the author believes that a transient positive Wassermann reaction may be found as a constant phenomenon during the acute stage of relapsing fever; that the transient character distinguishes it from the reaction due to syphilis, and if the positive result persists in a given case, syphilis may be suspected also.

Digestion of the Esophagus as a Cause of Postoperative and Other Forms of Hematemesis.—PRINGLE, STEWART and TEACHER (*Jour. Path. and Bacteriol.*, 1921, 24, 396) call attention to the fact that, in all probability, many of the cases interpreted as postmortem digestion of the esophagus have, in reality, an origin during life and report 18 cases, 16 of which were fatal. Ten of the cases were surgical in nature, 2 were associated with accidents and 6 with medical diseases. The outstanding clinical feature was vomiting of black or brown material, twenty-four to thirty-six hours before death, this symptom being found on 13 occasions. In the esophagus itself two striking and distinctive phenomena consist in the presence of black sloughs indicative of intense congestion and hemorrhage and the contrast between the broken-down esophagus and the stomach, which is either totally free from digestion or only slightly digested. Two of the cases showed a slight involvement, 7 presented extensive ulcerations and 9 had perforated with widespread destruction of the lower portion of the esophagus. Hemorrhages are always present in the esophageal wall and sometimes in the lungs and pleura. Microscopically the condition is a severe ulceration

attended by necrosis, solution of tissue and an acute inflammatory reaction. The authors believe that the condition is not rare, that it is not an agonal manifestation, "but one the nature of which can be diagnosed during life and which might be amenable to treatment."

HYGIENE AND PUBLIC HEALTH

UNDER THE CHARGE OF

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Typhus Fever on the San Juan Indian Reservation, 1920 and 1921.—ARMSTRONG (*Public Health Reports*, 1922, 37, 685) reports on an outbreak which resulted in 63 cases and 27 deaths on an Indian Reservation in the arid Southwest. The epidemic occurred among an Indian population showing 90 to 100 per cent infestation with head and body lice. The infection was probably introduced by laborers from Mexico. The early cases were variously diagnosed as influenza, measles and typhoid fever. The infection existed for about six months before being recognized. The problems of control were made more difficult by the isolation of the affected region, poor roads and scarcity of fuel and water. Delousing was accomplished by the application of a mixture of kerosene and gasoline, the use of a solution of nicotine, 1 : 1000, and by steam and boiling in the case of fomites. An emulsion of kerosene 2 parts, soap 1 part, and water 4 parts was also used to advantage for the body and hair. Cases were in general isolated in their own homes.

Experimental Studies on Tuberculous Infection.—KRAUSE (*Am. Rev. Tuberc.*, 1922, 6, 1) confirms his belief in the Cohnheim-Cornet-Ribbert Law of Localization, in view of a constantly recurring demonstration provided by infection of a culture of low virulence known as R. 1. Krause emphasizes his belief that at its culmination every case of tuberculosis represents, in some degree, the fruition of a long sequence of accidental circumstances. Krause has made a careful study of the course of tubercle bacilli from the path of entry to the lungs in guinea-pigs and rabbits. He has shown that in the guinea-pig the tracheo-bronchial nodes show gross tubercle earlier than the lungs. In rabbits, on the other hand, he generally finds marked involvement of the lungs with slight or only moderate infection of the tracheo-bronchial nodes. Between the microscopic structure of the normal lungs of guinea-pigs and rabbits, there are important differences, which would permit tubercle bacilli to pass through the lungs of the guinea-pigs on to the